

## **REMARKS/ARGUMENTS**

Claims 1-5 are currently pending in this application, and are at issue herein.

### **Objections to Drawings**

The Office Action objects to Figs. 1A and 1B of the drawings as not including the legend "Prior Art". In response, Applicants are submitting the attached two replacement sheets of drawings in which Figs. 1A and 1B have been amended to include the legend "Prior Art". A petition to accept color drawings has previously been filed. Applicants submit that the objections to the drawings have been overcome, and respectfully request withdrawal thereof.

### **Objections to Specification**

The Office Action has objected to the title of the invention as not being descriptive, and has requested a new title that is clearly indicative of the invention to which the claims are directed. To expedite prosecution, the title has been changed to "Field Emission Device with Mesh Grid".

Applicants respectfully request withdrawal of the objection to the title.

### **Allowable Subject Matter**

The Examiner has objected to claims 2 and 4 as being dependent upon a rejected base claim, but has indicated that they would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants thank the Examiner for this notification. However, based on at least the arguments submitted below, Applicants believe claims 1-5 are allowable in their present form and have therefore elected not to rewrite the objected to claims in independent form at this time.

## **§ 102 Claim Rejections**

Claims 1 and 5 stand rejected under § 102(b) as allegedly being anticipated by Japanese Patent Document JP5047354 to Shigeo et al. ("Shigeo"). Applicants respectfully traverse the claim rejections for at least the following reasons.

Independent claim 1 recites, *inter alia*:

- ***insulating layers which are formed on both sides of the mesh grid and have windows through which the plurality of electron-controlling holes are exposed and which correspond to a rejection where the plurality of electron-controlling holes are formed.***

Shigeo includes no disclosure or suggestion of the above-identified limitations.

In the Office Action, Shigeo is cited as teaching "insulating layers (plinths (20)) which are formed on both sides of the mesh grid and have windows through which the plurality of electron-controlling holes are exposed and which correspond to a region where the plurality of electron-controlling holes are formed." (Office Action dated July 15, 2005, pg. 3). Applicants respectfully submit that the Office misapplied Shigeo to the pending claims.

Applicants initially note that the bracing extending from the inside of the cathode and anode substrates in Shigeo is referenced as 18 and 20, respectively. A plinth 17 is provided at the base of the brace 18 at the cathode substrate 2. Similarly, a plinth 19 is provided at the base of the brace 20 at the anode substrate 9. Additionally, plinths 21 are provided on either side of the control electrode 15, with the control electrode 15 maintained between the cathode 2 and anode 9 substrates. The bracings 18, 20 and the plinths 17 and 19 are most analogous to the "spacers" of claim 1. The plinths referenced in Shigeo are not the insulating layers as recited in independent claim 1.

By its very definition, a plinth is not an insulating layer. Attached hereto as Attachment A is a printout from the Merriam-Webster OnLine Dictionary providing a definition for the word "plinth". As set forth therein, a plinth is defined as:

**1 a** : the lowest member of a base : **SUBBASE** **b** : a block upon which the moldings of an architrave or trim are stopped at the bottom

**2** : a usually square block serving as a base; *broadly* : any of various bases or lower parts -- see **BASE** illustration

**3** : a course of stones forming a continuous foundation or base course.

The plinths disclosed in Shigeo are provided as bases for the braces 18 and 20. They are not insulating layers as claimed in independent claim 1; e.g., insulating layers on both sides of a mesh grid having windows through which a plurality of electron-controlling holes are exposed and which correspond to a region where the plurality of electron-controlling holes are formed. Shigeo does not disclose the use of insulating layers at all as recited in claim 1. The plinths disclosed in Shigeo are provided as base member extensions of the respective braces 18 and 20, which the Office suggest meet claim 1's recitation of a "spacer". The plinths cannot meet both the "spacer" and the "insulating layer" recitations. Thus, Applicants submit that the Office Action has misapplied the Shigeo reference, in that the plinths disclosed therein are provided as base support members and not as an insulating layer on either side of a mesh grid, yet alone both sides of a mesh grid as recited in independent claim 1.

Accordingly, independent claim 1 is believed allowable under the prior art.

Dependent claims 2-5 depend cognately from independent claim 1 discussed above, and add features which further remove the present invention from the prior

art, as recognized by the Examiner in the indication of allowable subject matter in certain of these claims. The dependent claims are believed allowable over the prior art and a separate discussion of the dependent claims will not belabored for the sake of brevity.

### **§ 103 Claim Rejections**

Claim 3 stands rejected under § 103(a) as obvious over Shigeo in view of U.S. Patent No. 5,710,483 to Peng ("Peng"). Applicants respectfully traverse the claim rejection for at least the following reasons.

The deficiencies of the rejection based on Shigeo have been previously noted. Peng does not disclose or suggest the identified missing features or otherwise cure the deficiencies noted above. Peng neither discloses nor suggests insulating layers provided on both sides of a mesh grid as recited in independent claim 1, from which claim 3 depends, for instance. Accordingly, claim 3 is believed allowable over the prior art even if Peng is assumed to otherwise disclose the features for which it is identified in the Office Action.

**Conclusion**

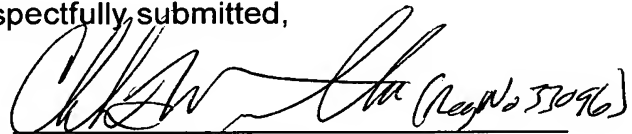
Applicants' invention, as recited in claims 1-5, is a field emission device wherein insulating layers are formed on both sides of a mesh grid and have windows through which a plurality of electron-controlling holes are exposed and which correspond to a region where the plurality of electron-controlling holes are formed. In exemplary embodiment, the insulating layers alleviate the problem of deforming the mesh grid caused by firing of the phosphor layer. Neither Shigeo nor Peng, taken alone or in combination, teach or suggest such a structure. Accordingly, Applicants submit that claims 1-5 are allowable over the prior art of record. Early notification to that effect is respectfully requested.

It is believed that this Response requires no fee. However, if a fee is required for any reason, the Commissioner is hereby authorized to charge Deposit Account No. 02-4800 the necessary amount.

Respectfully submitted,

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By:

 (Reg No 33096)  
for Bryan H. Opalko  
Registration No. 40,751

BUCHANAN INGERSOLL PC  
(including the attorneys from Burns, Doane,  
Swecker & Mathis)  
20th Floor, One Oxford Centre  
301 Grant Street  
Pittsburgh, Pennsylvania 15219-1410  
Phone: (412) 562-1893  
Fax: (412) 562-1041  
e-mail: opalkobh@bipc.com  
Attorneys for Applicant(s)

**Amendment to the Drawings:**

Two (2) replacement sheets of drawings are attached, which include Figs. 1A and 1B. These figures have been amended to include the legend "Prior Art" as required by the Office Action.

Attachment: Two (2) Replacement Sheets

**Amendment to the Title:**

On page 1 of the Application, above the Background of the Invention section, please amend the title of the Application to read as follows:

Field Emission Device with Mesh Grid